

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number  
**WO 2005/011845 A1**

(51) International Patent Classification<sup>7</sup>: **B01D 53/32, A61L 9/22, F24F 3/16, H01T 23/00, C01B 13/11, H01T 19/00**

(21) International Application Number:  
**PCT/GB2004/003140**

(22) International Filing Date: **19 July 2004 (19.07.2004)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
0316837.4 18 July 2003 (18.07.2003) GB  
0409547.7 29 April 2004 (29.04.2004) GB  
0410648.0 13 May 2004 (13.05.2004) GB  
60/577,952 8 June 2004 (08.06.2004) US

(71) Applicant and

(72) Inventor: **HALLAM, David, Richard [GB/GB]; 286 Hyde Road, Denton, Manchester, M34 3EH (GB).**

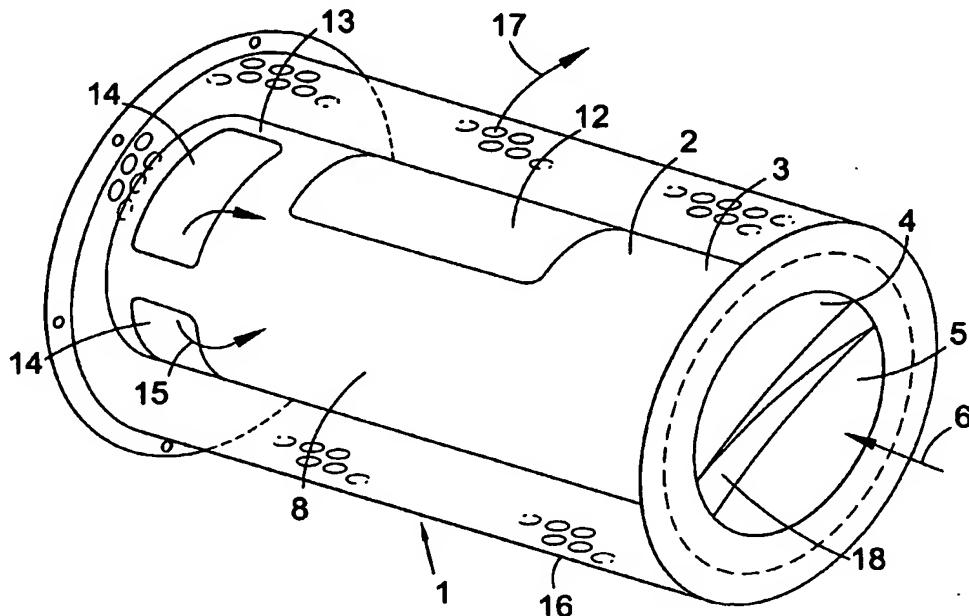
(74) Agents: **MACDOUGALL, Donald, Carmichael et al.; Marks & Clerk, 19 Royal Exchange Square, Glasgow G1 3AU (GB).**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): **AB, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PI, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.**

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): **ARIPO (BW, GI, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**

*[Continued on next page]*

(54) Title: AIR FILTRATION DEVICE



**WO 2005/011845 A1**

(57) Abstract: The present invention provides an air filtration cartridge (1) suitable for use in the treatment of air in a forced airflow air supply system. The cartridge (1) comprises an inner casing (2) having an upstream stage (3) defining a chamber (4) having an inlet (5) for receiving a forced airflow (6). The chamber (4) has an outlet (7) which leads into a downstream stage (8) comprising a filter holder and mounting a high airflow electrostatic filter. Inside the chamber (4) is a low power coronal discharge ozone generator device (10).



**Published:**

— *with International search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*